

**REMARKS**

Claims 1-30 are pending in the present application. Upon entry of the present Response, claims 1, 21, 22 and 30 will be the independent claims. Claims 1-4, 12-14, 16-18, 21-25 and 30 were amended herein to more clearly recite the invention. No new matter has been added.

In the Official Action, dated September 25, 2003, the application was objected to for various formal matters. The "Cross Reference to Related Applications" section of the specification was objected to for being out of date. Claims 1-3, 12-13, 16, 18 and 24 were objected to for various informalities relating to proper antecedent basis and claims 19-21 were objected to under 37 CFR 1.75(c) for alleged improper dependent form.

Additionally, claims 1-10, 12-18 and 30 were rejected under 35 U.S.C. § 101 for allegedly being directed to non-statutory subject matter. Claims 1-4, 11-13, 16 and 19-21 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent No. 5,991,595 (Romano et al.). Claims 5-10, 14-15, 17 and 22-29 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Romano et al. Claim 18 was rejected under 35 U.S.C. § 103(a) as allegedly obvious over Romano et al. in view of U.S. Patent No. 6,545,209 (Flannery et al.).

**Objection to the Specification**

As mentioned, the specification was objected to for including information about related applications that became out of date after the filing of the present application. The "Cross Reference to Related Applications" section has thus been amended herein to update the information. Accordingly, withdrawal of the outstanding objection to the specification is respectfully requested.

**Formal Objections to Claims 1-3, 12-13, 16, 18 and 24**

In the Official Action, claims 1-3, 12-13, 16 and 24 were objected to for variously pluralizing the terms "value" and "property" to state "values" and "properties" instead, respectively. Claims 1-3, 12-13, 16 and 24 have been amended herein to provide sufficient antecedent basis, and are believed to be sufficiently definite to overcome the objections to the claim terms. Claim 18 was objected to for missing a word. Applicants have corrected this herein by amending claim 18 to remove the extraneous word "example," the context of which is made clear by interrelated dependent claim 17.

In view of the amendments to the claims effected herein, withdrawal of the formal objections to claims 1-3, 12-13, 16, 18 and 24 is respectfully requested.

**Objections to the Claims under 37 CFR 1.75(c)**

Dependent claims 19 to 21 were objected to for allegedly failing to further limit independent claim 1 from which they depend. Applicants respectfully submit that the dependent claim format of claim 19 to 21 is commonly employed in conjunction with method claims for additional scope of protection. Commonly assigned related U.S. Patent No. 6,545,209, issued April 8, 2003 (claims 10, 11 and 12), cited in the outstanding Official Action, and U.S. Patent No. 6,466,234, issued October 15, 2002 (claims 24, 25 and 26), for instance, illustrate the typicality of the dependent claim formats utilized in claims 19 to 21.

Moreover, Applicants respectfully submit that each of claims 19 to 21 further limits the method of claim 1. For instance, claim 19 specifies that the method of claim 1 is achieved by computer executable instructions born on a computer readable medium, claim 20 specifies

that the method of claim 1 is achieved via computer executable instructions carried by a modulated data signal and claim 21 specifies that the method is performed by a computing device comprising means for carrying out the method of claim 1. In view of the present amendment to claim 1, however, Applicants have rewritten claim 21 in independent format for an additional scope of protection.

Withdrawal of the objection to claims 19 to 21 is respectfully requested.

**Rejections under 35 U.S.C. § 101**

In the Official Action, claims 1-10, 12-18 and 30 were rejected under 35 U.S.C. § 101 for allegedly being directed to non-statutory subject matter. In view of the amendments to claims 1 and 30 made herein, Applicants respectfully submit that the claims of the present application are directed to an invention that is within the technological arts and that produces a useful, concrete and tangible result. Applicants respectfully submit that the outstanding rejection to claims 1-10, 12-18 and 30 under 35 U.S.C. 101 has been rendered moot. See, e.g., *State St. Bank & Trust Co. v. Signature Fin. Group*, 149 F.3d 1368 (Fed. Cir. 1998) (“the mere fact that a claimed invention involves inputting numbers, calculating numbers, outputting numbers, and storing numbers, in and of itself, would not render it nonstatutory subject matter, unless, of course, its operation does not produce a ‘useful, concrete and tangible result.’”).

For the reasons set forth above, Applicants submit that claims 1-10, 12-18 and 30, as amended, recite patentable subject matter and that claims 1-10, 12-18 and 30 are in conformance with the requirements set forth in MPEP § 2106. Applicants therefore

respectfully request reconsideration of the rejection of claims 1-10, 12-18 and 30 on the basis of 35 USC § 101.

**Summary of the Invention**

At the time of Applicants' invention, large libraries of digital musical recordings were becoming available through global computer networks. Since people's tastes in music vary widely, in order to facilitate rapid search and retrieval of large collections of compositions, there was a great need to classify individual musical compositions in a quantitative manner based on highly subjective features.

At the time, a variety of inadequate classification and search approaches were being used. In one approach, the consumer selected a musical composition for listening or for purchase based on past positive experience with the same artist or with similar music. This approach had a significant disadvantage in that it involved guessing since the consumer had no prior familiarity with the selected musical composition. In another approach, merchants classified musical compositions into broad categories or genres. The disadvantage of that approach is that typically those genres were too broad. In still another approach, digital signal processing (DSP) analysis was used to try to match characteristics from song to song, but DSP analysis alone proved insufficient for classification purposes, particularly for large libraries of music.

In still another approach, called "collaborative filtering," a list of other albums or songs were derived from actual purchasing experiences of the system. However, this approach had a significant disadvantage, namely that the suggested albums or songs were based on extrinsic similarity as indicated by purchase decisions of others, rather than based

upon objective similarity of intrinsic attributes of a requested album or song and the suggested albums or songs. Moreover, the analysis tended to focus on albums, not songs, and early transactions tended to over-influence later buyers tending to self-perpetuate popular titles.

Accordingly, at the time of Applicants' invention, there was a need for an improved method of classifying information that was characterized by a two-pronged approach: the convergence of subjective (or perceptual) analysis and DSP acoustical analysis criteria. With such a classification technique, to satisfy the subjective analysis prong, it was recognized by Applicants that it would be desirable to provide training to humans at the front end of the classification process in order to generate more uniform human classification of media.

Thus, the invention provides methods for training a trainee to analyze media, such as music, in order to recognize and assess the fundamental properties of any piece of media, such as a song or a segment of a song. The process of the present invention includes an initial tutorial and a double grooving process. The tutorial phase exposes the trainee to a canonical set of classifications and then exposes the trainee to certain definitive song examples for each classification level of fundamental properties. The double grooving phase leverages the skills of the experts that defined the canonical set of classification terms to ensure that new listeners, even though exposed to the tutorial, appropriately recognize all fundamental musical properties. Thus, for specific song examples, a new listener matches results with the system experts within a degree of tolerance. When a high enough degree of cross-listening consensus is reached, the new listener becomes a groover and can classify new songs or segments of songs.

**Romano et al. and the Rejection of Claims 1-17 and 19-29 under 35 U.S.C. §§ 102, 103**

Claims 1-4, 11-13, 16 and 19-21 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent No. 5,991,595 (Romano et al.). Claims 5-10, 14-15, 17 and 22-29 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Romano et al.

At the outset, Applicants would like to stress that, in contrast to Applicants' invention, Romano et al. is not at all related to the problems associated with the proliferation of unclassifiable and unsearchable libraries of music. Instead Romano et al. is concerned with standardized tests, such as the SAT, GRE or GMAT examinations, that began requiring open-ended responses, such as essay responses, in addition to responses to multiple choice responses. These open-ended responses are often referred to as constructed responses (CRs), which are particularly well-suited to human raters.

While Romano et al. discloses a system that relates to training humans to score CRs, Applicants submit that in view of the present amendments to claims 1, 21 and 22, the outstanding rejections to claims 1-17 and 19-29 have been rendered moot. In particular, the claims now recite that the type of media entity, such as music, has **a plurality of fundamental properties**, such as rhythm, mood, etc., which can be subcategorized into a greater granularity of fundamental properties. In accordance with the invention, for instance as recited in claim 1, a computing device receives trainee-assigned value(s) corresponding to at least one fundamental property of the plurality of fundamental properties of the media entity.

In contradistinction, Romano et al. discloses to assign a single score to a CR, not a plurality of different scores for different properties of the CR. See, e.g., Col. 1, line 63 ("The

rater enters a score via the rater station.”). This makes sense because a goal of the invention is to train trainees according to an overall process that provides end users with the ability to find music according to a variety of subjective classifications (as converged with objective DSP acoustical analysis) whereas the goal of Romano et al. is to train humans to assign an accurate score to the essay prepared in response to an essay question. In other words, a song can be classified to a large number of classification granularities, whereas, as disclosed by Romano, a CR receives a single score.

**Rejection to Claim 18 under 35 U.S.C. § 103**

Claim 18 was rejected under 35 U.S.C. § 103(a) as allegedly obvious over Romano et al. in view of Flannery et al. The rejection to claim 18 under 35 U.S.C. § 103 is respectfully traversed.

Under 35 U.S.C. § 103(c), “Subject matter developed by another person, which qualifies as prior art under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.”

Applicants respectfully submit that to the extent Flannery et al. that Flannery et al. only qualifies as prior art under subsection (e) of section 102, and because Flannery et al. and the present application are both owned by the same assignee, Flannery et al. cannot be applied to preclude patentability of the present invention. In this regard, Applicants also respectfully point out that Flannery et al. was incorporated by reference into the present

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application in the "Cross Reference to Related Applications" section. Withdrawal of the rejection to claim 18 under 35 U.S.C. § 103 is thus respectfully requested.

**CONCLUSION**

Applicants believe that the present Amendment is responsive to each of the points raised by the Examiner in the Office Action, and submit that Claims 1-30 of the application are in condition for allowance. Favorable consideration and passage to issue of the application at the Examiner's earliest convenience is earnestly solicited.

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